

From Wind to Win: Vattenfall's recycled turbine blades hit the ski slopes

Imagine the thrill of gliding down the piste on skis that not only offer top-notch performance but also contribute to a sustainable future. In a groundbreaking collaboration, Vattenfall, Gjenkraft and EVI are using discarded wind turbine blades to create high-performance skis. This project showcases the potential of circular economy principles and offers new inspiration to increase sustainability in the sports industry.

"Circularity is essential to securing future resource needs, reducing costs, and achieving our sustainability targets", says Gustav Frid, Environment & Sustainability Specialist at Vattenfall. "By moving from a linear take-make-waste economy to a circular economy, we can close the loop and use materials again through recycling. This project perfectly illustrates how technology provides a sustainable alternative to traditional ski-making materials. We hope it will inspire others and foster new ideas for accelerating circularity."

Thousands of turbines reach end of life

As the first generation of turbines reaches the end of its life, thousands of turbines worldwide will be decommissioned or replaced over the next few years. While large parts of these turbines can be recycled, the blades present a significant challenge due to their composite construction, making material separation difficult. Vattenfall, a leader in sustainable energy solutions, wants to be able to recycle 100% of its wind turbine blades by 2030. Vattenfall has already initiated several projects aimed at discovering scalable solutions. To promote awareness about circularity and inspire innovation Vattenfall converted a discarded nacelle into a tiny house last year.



Endre Hals is the founder of Norwegian ski company EVI ski. Here he is demonstrating how the skis are manufactrured from decommissioned wind turbine blades.

Dutch blades go to Norway

In 2021, Vattenfall took a significant step towards addressing this challenge by partnering with Norwegian company Gjenkraft. Gjenkraft specializes in extracting valuable materials such as fiberglass and carbon fiber from end-of-service blades. These materials can be repurposed in various industries, reducing waste and conserving natural resources. Blades from decommissioned Dutch wind farm Irene Vorrink were sent to Norway for processing.

Marcin Rusin, co-founder of Gjenkraft: "Our goal has always been to demonstrate that this issue can be resolved. We already had the technology to recover valuable raw materials from composite waste, the next step was to find a high-end product that would appeal to the public. As a Norwegian company with team members who are enthusiastic about skiing, deciding to manufacture skis was a natural fit. We are very excited to see this concept come to fruition."

Transforming worn-out skis

Vattenfall joined the collaboration between Gjenkraft and Norwegian ski company EVI, known for its innovative use of recycled materials in ski production. EVI has a proven track record of transforming broken and worn-out skis into new pairs and incorporated

carbon fibers from decommissioned Vattenfall blades to reinforce their skis, enhancing their durability and performance.

Endre Hals, founder of EVI skis: "We are humbly aware that a small ski producer like EVI will never be able to make a big impact on the use of this kind of industrial waste.

Therefore, we are extra stoked that Gjenkraft and Vattenfall want to bring us on to realize this awesome vision for the future of product development."

Test the skis and hit the slopes in Åre, Sweden

Vattenfall has placed an order for 15 pairs of skis with EVI, including alpine skis, carving skis, and one pair of race skis. These high-quality skis, reinforced with carbon extracted from discarded turbine blades, will allow skiers of all levels to experience the potential of sustainable manufacturing. Visitors of the World Cup Women's slalom held on 8/9 March in Åre are invited to test the skis. Next to the racetrack Vattenfall will set up a ski test for interested skiers.

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Pictures and video footage:

Find high res pictures and 4k raw video footage of the Blades to Skis project in our newsroom: Press kit: From blades to skis